

Capitalism, Global Poverty, and the Case for Democratic Socialism

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Over the past several years, a new narrative about global poverty has become entrenched in mainstream discourse. It holds that extreme poverty—a condition of absolute deprivation associated with severe calorie and nutrient deficiency and an inability to access basic goods—is the natural condition of humanity, and afflicted some 90 percent of the world population before the rise of capitalism liberated people from misery. This narrative relies in large part on a graph showing the proportion of people living in extreme poverty since 1820, declining from a starting point of 90 percent. The graph was originally developed by the former World Bank economist Martin Ravallion and was later popularized by Steven Pinker in his bestselling book, *Enlightenment Now*. It has since circulated widely on social media.

This narrative suffers from several empirical problems, however, which we explored in a recent article published in *World Development*.¹ First, measuring poverty requires direct data on household consumption, but this is generally not available prior to the 1980s. To get around this limitation, the Ravallion/Pinker graph relies on historical GDP growth rates as a proxy for changes in household consumption. This is not a valid method, however, because empirical data show that the two indicators generally do not move together.² As the economist Angus Deaton points out, GDP and household consumption surveys “evidently measure different things.”³ This problem is particularly acute in the colonial period, which was characterized by dispossession and destruction of subsistence

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This article builds on data and analysis provided in the authors’ original article on the problem of “Capitalism and Extreme Poverty,” published in *World Development* in 2022 (see endnote 1).

economies – interventions that may have increased GDP while simultaneously constraining people’s access to subsistence and livelihoods. For a detailed discussion of what is (and is not) accounted for in historical GDP, see Appendix A of our *World Development* paper.

The second problem is that the graph relies on the World Bank’s \$1.90 (2011 purchasing power parity [PPP]) threshold for extreme poverty. This metric has come under criticism for more than a decade, because PPPs are based on prices across the whole economy, when what matters for poverty is the prices of essential goods that are necessary to meet basic needs (such as food, housing, and fuel). These prices vary widely across time and space in a manner that is not captured by PPPs. To correct for this, economic historians have developed ways to measure income *vis-à-vis* the cost of basic needs. Applying this approach to India shows that extreme poverty was relatively low in the precolonial era (perhaps around 10 percent in the late sixteenth century), and *increased* during the period of capitalist integration, from 23 percent in 1810 to over 50 percent by the middle of the twentieth century, in stark contrast to the narrative suggested by the Ravallion/Pinker graph.⁴

A more recent version of the Ravallion/Pinker graph was published by the OECD, showing a similar curve but with a lower poverty rate (75 percent) in the historical period.⁵ This version uses the cost of basic needs instead of the \$1.90 PPP threshold, but still relies on GDP growth rates as a proxy for changes in household consumption (while household consumption is assumed to grow at a slower rate than GDP in the post-1950 period, the ratio is exogenously determined, and the unaltered GDP growth rates are used prior to 1950). The OECD graph is a substantial improvement over the Ravallion/Pinker version, but does not overcome this fundamental problem. We address this issue in Appendix A of the *World Development* article.

A third limitation of the graph has to do with its starting date (1820). The graph has been used to tell a story about capitalism, but the world capitalist economy was established in the late fifteenth and early sixteenth centuries.⁶ In other words, the graph excludes more than three hundred years of relevant history. During this period, economic growth in Western Europe depended on processes of dispossession that caused major social dislocation (for example, the Western European enclosures, Eastern Europe’s “second serfdom,” mass enslavement of Africans, the colonization of the Americas and India, and so on). The graph excludes this history and gives the impression of poverty in 1820 as a primordial condition.

Given these issues, the standard public narrative about the history of extreme poverty needs reassessment. Toward this end, we took an empirical approach to examine the social impact of capitalist expansion and

integration using data on real wages (with respect to the cost of basic needs), human height, and mortality since the long sixteenth century, for five world regions (Europe, Latin America, sub-Saharan Africa, South Asia, and China). This data points to three conclusions.

First, it is unlikely that 90 percent (or even 75 percent) of the global population lived in extreme poverty prior to the rise of capitalism. Historically, unskilled urban laborers in all regions tended to have wages high enough to support a family of four above the poverty line. Extreme poverty seems to arise predominantly during periods of severe social and economic distress, like famines, wars, and institutionalized dispossession, which became particularly prevalent under colonialism. Rather than being the natural condition of humanity, extreme poverty is a symptom of severe social dislocation and displacement.

The second conclusion is that the rise of capitalism coincided with a deterioration in human welfare. In every region we assessed, incorporation into the capitalist world-system was associated with a decline in wages to below subsistence, a deterioration in human stature, and a marked upturn in premature mortality. In parts of Latin America, sub-Saharan Africa, and South Asia, key welfare metrics have still not recovered.

Our third conclusion is that in those regions where progress has occurred, it began much later than the Ravallion/Pinker graph suggests. In the core regions of Northwest Europe, welfare standards began to improve in the 1880s, around four centuries after the emergence of capitalism. In the periphery and semi-periphery, progress began in the mid-twentieth century. This corresponds with the rise of organized labor, the anticolonial movement, and other radical and progressive social movements, which organized production around meeting human needs, redistributed wealth, and invested in public provisioning systems (in Europe, investment in public health care, education, and other forms of social security increased from close to zero percent of GDP in the late nineteenth century to around a third of GDP by the mid-1970s).⁷

For a full discussion of these findings, we refer readers to our *World Development* publication. Here we seek to expand on the paper with additional reflections on capitalism and poverty, the role of industrialization, and implications for future policy.

Extreme Poverty Is Not a Legitimate Benchmark for Social Progress

It is important to clarify immediately that extreme poverty is defined in terms of subsistence goods. It refers to the inability to access basic food, shelter, clothing, and fuel; it does *not* refer to higher welfare standards such as access to electricity, modern health care, refrigerators, and so

on, which are available today. It is not difficult to meet basic subsistence requirements, and historical data suggests that human communities are normally capable of doing so, even in pre-industrial contexts, with their own labor and with the resources available to them in their environment or through exchange. The main exceptions to this are in cases of natural disaster, or under conditions in which people are cut off from land and commons, or when their labor, resources, and productive capacities are appropriated by a ruling class or an imperial power. The historical data we review shows that it was the process of colonization and capitalist integration that mainly pushed people into extreme poverty and caused social indicators to deteriorate.

The crucial implication of this finding is that extreme poverty should not be used as a benchmark against which to measure progress. Extreme poverty should not exist, period. The fact that up to 17 percent of the world population lives in extreme poverty today (according to Robert Allen's data on cost-of-basic-needs poverty) should be understood as an indictment of our economic system.⁸ It is a sign that severe social dislocation remains institutionalized in the capitalist world economy. Yes, the prevalence of extreme poverty is lower today than it was at the height of the colonial period, but this is not sufficient reason for celebration. The colonial high-water mark was an *effect* of capitalist policy and should never have existed.

Furthermore, extreme poverty can and should be ended immediately. It does not require further increases in aggregate production, it does not require a massive mobilization of charity; rather, it requires no more than restoring people's access to the basic resources they need for survival. The existing world economy, despite its extraordinary output, appears incapable of achieving this basic objective: projections indicate that with existing trends it will take at least forty years to end extreme poverty, even according to the World Bank's inadequate metric (three decades later than promised by the sustainable development goals), and possibly as long as a century.⁹ This should be condemned as a failure. Instead, we are enjoined to accept as "normal" a form of suffering that need not exist and can be ended immediately. What is required? We must ensure peasants have access to productive land, workers have secure employment and living wages, and universal access to affordable housing and food. This is not complicated, it is *basic*.

Within Capitalism, Progress in the North Has Depended on Imperialism

The historical record demonstrates that dramatic progress on welfare indicators occurred in the core economies after 1880, with the rise of the

labor movement, social democratic parties, and movements that secured suffrage for working men and, later, for women. These gains accelerated in the early/mid-twentieth century, delivering extremely high welfare ratios. It is crucial to understand that the gains during this latter period were due not only to progressive movements *within* the core, but also to socialist movements in the periphery, which were (especially in the case of the USSR) demonstrating that socialist and communist alternatives were possible. The rise of socialism in the East inspired socialist movements in the West (most famously in Germany, which came to the brink of a socialist revolution during the Spartacist and Ruhr uprisings of 1919–20). These revolutionary movements posed a real threat to capitalism in the core. Capitalism survived in part by crushing these movements – quite often violently, but also by making concessions to working-class demands, including wage improvements and some public services, although never conceding to the core demands for decommodification and economic democracy. Thus, the rise of the social democratic welfare state.

Capital accumulation requires cheap labor, however, and these concessions would have brought capitalism in the core to its knees were it not for the fact that capitalists were able to obtain cheap labor instead in the periphery, through colonial and neocolonial forms of appropriation, which continue to this day.¹⁰ The unique privilege of imperialism allowed capital in the core to maintain accumulation despite concessions to its working classes – a privilege that is not available to most states in the periphery.¹¹ This is what explains the extreme disparity that persists between social indicators in the capitalist core (where the average welfare ratio of an unskilled laborer is 10–20) versus those in the capitalist periphery, where the average welfare ratio is less than 2, and where in many cases wages and/or heights have not recovered from the immiseration caused during the period of capitalist integration.¹² To understand the relationship between capitalism and human welfare today, we must look at living conditions in the capitalist periphery.

Of course, the core could have taken a different direction. It could have accepted the demands of workers and anti-imperialist movements, abandoned the imperatives of capital accumulation, and transitioned to a postcapitalist system – thus achieving social progress *without* imperialism. Social progress does not require imperialism. Capitalism does.

Progress Today Should Be Measured Against Decent Living Standards

Noting that extreme poverty was not the normal condition of humanity prior to the rise of capitalism is not to say that life was great at that

time. Clearly nobody then had access to the higher welfare standards that are available today. This is where industrialization and technological development become so important. Industrialization has brought the capacity to produce new goods that did not exist in the past: electricity, modern health care, public transit, clean cooking fuel, higher education, communication technology, household durables, and so on, which make it possible to achieve high life expectancies and decent lives for all. By these standards, obviously most everyone was poor prior to industrialization, as these goods did not exist or were very rare.

We have already established that extreme poverty is not a legitimate benchmark against which to measure progress at any time. But it *certainly* should not be used as a threshold for human welfare today. The higher-order goods that exist today are essential to decent living and should be available to everyone. As a share of global productive capacity, this does not require much (as with basic goods like food and shelter in the pre-industrial period). Yet the scale of decent-living poverty is astonishing: 2.4 billion people lack food security; 3.2 billion cannot afford a healthy diet; 3.2 billion do not have a clean cooking stove; 3.6 billion do not have safely managed sanitation facilities; 3.8 to 5 billion people do not have access to essential health services.¹³

This is not because there is a deficit of productive capacity (on the contrary, these goods could be provided for everyone on the planet quite easily), but because production remains overwhelmingly organized around capital accumulation and profit maximization rather than around human needs and well-being. Even the core economies have decent-living deprivation, despite high levels of production, with millions unable to access decent housing, health care, and nutrition. While progressive social movements have won a great deal over the past century, in terms of securing fair wages, public services, and economic rights, the struggle must continue to deliver a truly just economy.

The massive prevalence of decent-living deprivation in the twenty-first century underscores an important fact: industrialization does not guarantee that the living standards of ordinary people will improve. As always, the key questions are: How is industrial capacity used? Is it used to secure decent lives for all, or to service capital accumulation? How is the division of labor organized? Are all regions given an equal role in industrial production, or are some regions made to play the role of subservient suppliers in global commodity chains? How are workers treated? Do they have control over the means of production, and secure access to essential goods and services? All of this depends on the political system, the provisioning system, and the balance of class power. Industrialization

is a necessary but not sufficient condition for achieving decent lives for all. Human development depends on the strength of progressive social movements that push to organize production around human needs rather than elite accumulation.

In the Global South, Capitalism Constrains Technological Development

This raises the question: if industrial production is necessary to meet decent-living standards today, then perhaps capitalism – notwithstanding its negative impact on social indicators over the past five hundred years – is necessary to develop the industrial capacity to meet these higher-order goals. This has been the dominant assumption in development economics for the past half century. But it does not withstand empirical scrutiny. For the majority of the world, capitalism has historically *constrained*, rather than enabled, technological development – and this dynamic remains a major problem today.

It has long been recognized by liberals and Marxists alike that the rise of capitalism in the core economies was associated with rapid industrial expansion, on a scale with no precedent under feudalism or other precapitalist class structures.¹⁴ What is less widely understood is that this very same system produced the opposite effect in the periphery and semi-periphery. Indeed, the forced integration of peripheral regions into the capitalist world-system during the period circa 1492 to 1914 was characterized by widespread deindustrialization and agrarianization, with countries compelled to specialize in agricultural and other primary commodities, often under “pre-modern” and ostensibly “feudal” conditions.

In Eastern Europe, for instance, the number of people living in cities declined by almost one-third during the seventeenth century, as the region became an agrarian serf-economy exporting cheap grain and timber to Western Europe.¹⁵ At the same time, Spanish and Portuguese colonizers were transforming the American continents into suppliers of precious metals and agricultural goods, with urban manufacturing suppressed by the state.¹⁶ When the capitalist world-system expanded into Africa in the eighteenth and nineteenth centuries, imports of British cloth and steel destroyed Indigenous textile production and iron smelting, while Africans were instead made to specialize in palm oil, peanuts, and other cheap cash crops produced with enslaved labor.¹⁷ India – once the great manufacturing hub of the world – suffered a similar fate after colonization by Britain in 1757.¹⁸ By 1840, British colonizers boasted that they had “succeeded in converting India from a manufacturing country into a country exporting raw produce.”¹⁹ Much the same story unfolded in

China after it was forced to open its domestic economy to capitalist trade during the British invasion of 1839–42. According to historians, the influx of European textiles, soap, and other manufactured goods “destroyed rural handicraft industries in the villages, causing unemployment and hardship for the Chinese peasantry.”²⁰

The great deindustrialization of the periphery was achieved in part through policy interventions by the core states, such as through the imposition of colonial prohibitions on manufacturing and through “unequal treaties,” which were intended to destroy industrial competition from Southern producers, establish captive markets for Western industrial output, and position Southern economies as providers of cheap labor and resources. But these dynamics were also reinforced by structural features of profit-oriented markets. Capitalists only employ new technologies to the extent that it is profitable for them to do so. This can present an obstacle to economic development if there is little demand for domestic industrial production (due to low incomes, foreign competition, etc.), or if the costs of innovation are high.

Capitalists in the Global North overcame these problems because the state intervened extensively in the economy by setting high tariffs, providing public subsidies, assuming the costs of research and development, and ensuring adequate consumer demand through government spending.²¹ But in the Global South, where state support for industry was foreclosed by centuries of formal and informal colonialism, it has been more profitable for capitalists to export cheap agricultural goods than to invest in high-technology manufacturing.²² The profitability of new technologies also depends on the cost of labor. In the North, where wages are comparatively high, capitalists have historically found it profitable to employ labor-saving technologies.²³ But in the peripheral economies, where wages have been heavily compressed, it has often been cheaper to use labor-intensive production techniques than to pay for expensive machinery.²⁴

Of course, the global division of labor has changed since the late nineteenth century. Many of the leading industries of that time, including textiles, steel, and assembly line processes, have now been outsourced to low-wage peripheral economies like India and China, while the core states have moved to innovation activities, high-technology aerospace and biotech engineering, information technology, and capital-intensive agriculture.²⁵ Yet still the basic problem remains. Under neoliberal globalization (structural adjustment programs and WTO rules), governments in the periphery are generally precluded from using tariffs, subsidies, and other forms of industrial policy to achieve meaningful development and economic sovereignty, while labor market deregulation and global labor

arbitrage have kept wages extremely low. In this context, the drive to maximize profit leads Southern capitalists and foreign investors to pour resources into relatively low-technology export sectors, at the expense of more modern lines of industry.

Moreover, for those parts of the periphery that occupy the lowest rungs in global commodity chains, production continues to be organized along so-called pre-modern lines, even under the new division of labor. In the Congo, for instance, workers are sent into dangerous mineshafts without any modern safety equipment, tunneling deep into the ground with nothing but shovels, often coerced at gunpoint by U.S.-backed militias, so that Microsoft and Apple can secure cheap coltan for their electronics devices.²⁶ Pre-modern production processes predicated on the “technology” of labor coercion are also found in the cocoa plantations of Ghana and Côte d’Ivoire, where enslaved children labor in brutal conditions for corporations like Cadbury, or Colombia’s banana export sector, where a hyper-exploited peasantry is kept in line by a regime of rural terror and extrajudicial killings overseen by private death squads.²⁷

Uneven global development, including the endurance of ostensibly “feudal” relations of production, is not inevitable. It is an effect of capitalist dynamics. Capitalists in the periphery find it more *profitable* to employ cheap labor subject to conditions of slavery or other forms of coercion than they do to invest in modern industry.

Successful Development Requires Public Planning

The existing arrangement of the world economy cannot deliver meaningful development in the Global South. As we have seen, imperialist dynamics and the profit-orientation of national capital and foreign investment militate against this possibility. The anticolonial movements of the mid-twentieth century understood this fact. They knew that achieving development would require directly mobilizing production to increase the output of key products, develop necessary technologies, and deliver essential goods and services.

Most of these movements were inspired by socialist principles, to varying degrees, which they saw as necessary for economic sovereignty and social progress. Many were influenced by the achievements of the Russian Revolution.²⁸ Prior to 1917, Russia had been a low-wage agrarian hinterland exporting cheap raw materials (grain, hemp, flax, etc.) to western Europe.²⁹ In 1899, the Russian Finance Minister Sergei Witte noted that “The economic relations of Russia with western Europe are fully comparable to the relations of colonial countries with their metropolises.”³⁰ The communist revolution, and the transition to planning

in 1928, transformed this arrangement.³¹ By setting output targets for machinery, factories, and other producer goods, the USSR was able to increase production in sectors that are usually neglected under conditions of peripheral capitalism. Soviet industrial output expanded rapidly over the next thirteen years: material output of pig iron increased by 352 percent; electric power by 857 percent; the number of machine tools by 1,997 percent; and the number of motor vehicles by 28,457 percent.³² By the 1950s – within a single generation – the USSR had become a modern industrial economy, and the first country to achieve several major landmarks in aerospace engineering – including putting the first person into space and establishing the first space station.

Several countries in the Global South incorporated similar planning strategies in the mid-twentieth century. Others took a more mixed “developmentalist” approach, relying on industrial policy within a market economy. Most used tariffs and subsidies to support national industry, plus land reform, nationalization, capital controls, and public finance to mobilize investment for neglected sectors and public services. This approach succeeded in delivering rapid development and improvements in social outcomes during the 1950s through the ’70s, overcoming centuries of stagnation or decline. The evidence we reviewed in *World Development* demonstrates this progress in cases across Latin America, sub-Saharan Africa, South Asia, and China.

The success of these strategies should not come as a surprise. After all, even under capitalism, the core economies have always relied upon public planning to facilitate technological development. During the so-called first industrial revolution (circa 1750 to circa 1840), England was one of the most strongly interventionist states in the world, using highly protectionist tariffs, high tax rates, and public deficit spending to build and direct industrial capacity.³³ Germany, Japan, and the United States used similar interventionist policies to “catch up” with England from the 1850s on.³⁴ More recently, we know that public investment has been responsible for many of the major innovations of the IT revolution, including the internet, GPS, touch screens, cellular technology, lithium-ion batteries, micro hard drives, liquid-crystal display, and Siri, among others.³⁵

For the communist countries in the periphery, the goal was not only to mobilize resources for industrialization, but to organize production around public services and human needs in ways that were neglected or even impossible under capitalism. Empirical studies demonstrate that they achieved better social outcomes than their capitalist counterparts at any given level of national production, including higher life expectancy, better education attainment, and lower child mortality.³⁶ They also delivered strong progress

against extreme poverty: by the 1980s, the prevalence of basic-needs poverty was near zero in both China and Russia.³⁷ As the economist Amartya Sen remarked in his 1981 study of health and literacy achievements around the world: “One thought that is bound to occur is that communism is good for poverty removal.”³⁸ Sen took particular note of the dramatic mortality differences between China and India, arguing that India suffered more than thirty-one million excess deaths every eight years compared to the mortality rate in China – deaths that could have been prevented with simple policies to ensure universal access to food and health care.³⁹

But of course this approach – and the era of economic sovereignty in the periphery – did not last long. Socialist and state-led development policy constrained Northern access to cheap labor and resources, so the core states intervened, in some cases by deposing progressive and nationalist governments through coups (in the Democratic Republic of Congo, Indonesia, Brazil, Ghana, Chile, and so on), in others by imposing structural adjustment programs that reversed the policies of the anticolonial movements (abolishing protective tariffs and subsidies, cutting public production and public services, and privatizing national assets).⁴⁰ Data presented in our *World Development* paper indicates that these neocolonial interventions reversed the progress made during the developmentalist period, with real wages in many cases declining to below the level of the seventeenth or eighteenth centuries. Structural adjustment in China and Russia in the early 1990s caused a dramatic increase in basic-needs poverty, which shot from near zero to 68 percent and 24 percent, respectively.⁴¹

There were exceptions, of course. The United States and its allies allowed and indeed actively supported Taiwan and South Korea to continue using state-led development policy, building them up as a *cordon sanitaire* around revolutionary China. China, despite the basic-needs deprivation induced by structural adjustment, has managed to continue investing in public objectives with considerable success.⁴² Cuba avoided structural adjustment altogether, maintained a socialist economy, and today outperforms most of the periphery in terms of welfare ratios, life expectancy, infant mortality, and nutrition.⁴³ Cuba’s government has also fostered a thriving public biotech industry, which has developed cutting-edge medical innovations including drugs for diabetic foot ulcers and at least two vaccines against COVID-19, despite being subject to an illegal U.S.-imposed blockade that prevents the import of medical technologies.⁴⁴

This history illuminates possibilities for escaping underdevelopment within the imperialist world economy. But it also comes with warnings. Developmentalism without socialist policy may fail to address basic problems of inequality and precarity, as the South Korea case makes clear.

Continued capital accumulation may create pressures for cheapening labour, including through subimperialist appropriation, which works against the goals of human development. This approach cannot deliver economic democracy and well-being for all. Top-down planning, as in the Soviet Union and China in the Mao Zedong period, may allow managers to pursue policies that run against the interests of the population – for instance, the agricultural policies that caused the Soviet famine of 1932–33.⁴⁵ This is at odds with the socialist goals of workers’ self-management and democratic control over production.⁴⁶ To overcome these problems, we need a socialist strategy in the twenty-first century that is radically democratic, extending democracy to production itself.⁴⁷

Conclusions

In sum, the narrative that the rise of capitalism drove progress against extreme poverty is not supported by empirical evidence. On the contrary, the rise of capitalism was associated with a notable decline in human welfare, a trend that was only reversed around the twentieth century, when radical and progressive social movements sought to gain some control over production and organize it more around meeting human needs.

As for the condition of extreme poverty, it cannot legitimately be used as a benchmark for measuring progress. Extreme poverty is not a natural condition, but an effect of dispossession, enclosure, and exploitation. It need not exist anywhere, and certainly should not exist in any just and humane society. It can and must be abolished immediately.

If our goal is to achieve substantive improvements in human welfare, progress should be measured against decent living standards and access to modern amenities. Capitalism currently shows no signs of ever meeting this objective, and imperialist dynamics in the world economy seem actively to prevent it.

As we have seen, the historical record is clear that public planning and socialist policy can be effective at delivering rapid economic, technological, and social development. Rediscovering the power of this approach will be essential if Global South governments are to increase their economic sovereignty and mobilize production to ensure decent lives for all.⁴⁸ Achieving this objective requires building political movements of the Southern working classes and peasantries powerful enough to replace governments that currently are captured by political factions aligned with national or international capital; reducing reliance on core creditors, currencies, and imports; and establishing South-South alliances capable of withstanding any retaliation. Progressive formations in the core should be prepared to support and defend these movements.

The case for socialist policy is particularly clear given the reality of the global ecological crisis we face, which is being driven overwhelmingly by excess energy and material resource use in the core states, including through their net appropriation of resources from the periphery.⁴⁹ We know that capitalist development is ecologically inefficient when it comes to meeting human needs. Because production under capitalism is organized around profit maximization, we end up with ecologically perverse forms of output: sport utility vehicles, fast fashion, armaments, and advertising instead of public transit, affordable housing, and nutritious food. The result is a global economy where the core states dramatically overuse resources and energy and yet the system still fails to meet many basic human needs.

Recent modeling indicates that to decarbonize fast enough to stay under a 1.5°C increase in global average temperature at the end of the century will require substantial reductions in global energy and material use, shouldered by the core economies.⁵⁰ Such reductions can be achieved while at the same time ending poverty and delivering decent living standards for a global population of ten billion – including housing, electricity, heating/cooling, clean cooking, refrigeration, transit, health care, education, sanitation, mobile phones, and computing.⁵¹ But to achieve this requires democratic planning: (a) to ensure the production and rapid dispersion of efficient technologies; (b) to reorganize production around meeting human needs rather than around capital accumulation; (c) to scale down ecologically destructive and less-necessary forms of production to reduce excess energy and material throughput in the core; and (d) to dramatically cut the purchasing power of the rich and distribute resources more evenly.⁵²

Notes

1. Dylan Sullivan and Jason Hickel, "Capitalism and Extreme Poverty: A Global Analysis of Real Wages, Human Height, and Mortality since the Long 16th Century," *World Development* 161 (2023).
2. Angus Deaton, "Measuring Poverty in a Growing World (or Measuring Growth in a Poor World)," *The Review of Economics and Statistics* 87, no. 1 (2005): 1–19.
3. Angus Deaton, "Counting the World's Poor: Problems and Possible Solutions," *World Bank Research Observer* 16, no. 2 (2001): 133.
4. Robert C. Allen, "Poverty and the Labor Market: Today and Yesterday," *Annual Review of Economics*, 12 (2020): 107–34.
5. Michail Moatsos, "Global Extreme Poverty: Present and Past since 1820," in *How Was Life? Volume II: New Perspectives on Well-being and Global Inequality since 1820* (Paris: OECD Publishing: 2021): 186–215.
6. Immanuel Wallerstein, *The Modern World-System, Vol. I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (Cambridge, Massachusetts: Academic Press, 1974).
7. See Figure 10.1 in Lucas Chancel et al., *World Inequality Report 2022* (World Inequality Lab, 2022), 167, wir2022.wid.world.
8. Allen estimates the poverty rate in 145 countries, or around 95 percent of the global population. We calculated the global poverty rate as the population-weighted average of these data. See Allen, "Poverty and the Labor Market."
9. Charles Kenny and Zack Gehan, "Scenarios for Future Global Growth to 2050," Center for Global Development (2023). Extrapolating the central scenario indicates extreme poverty would reach zero by 2060. A longer timeframe is indicated by David Woodward, "Incrementum ad Absurdum: Global Growth, Inequality and Poverty Eradication in a

Carbon-Constrained World," *World Economic Review* 4 (2015): 43–62.

10. Jason Hicke, Dylan Sullivan, and Huzaifa Zoomkawala, "Plunder in the Post-Colonial Era: Quantifying Drain from the Global South Through Unequal Exchange, 1960–2018," *New Political Economy* 26, no. 6 (2021): 1030–47.

11. Zak Cope, *The Wealth of (Some) Nations: Imperialism and the Mechanics of Value Transfer* (London: Pluto, 2019); Phillip Hough, "Global Commodity Chains and the Spatial-Temporal Dimensions of Labor Control: Lessons from Colombia's Coffee and Banana Industries," *Journal of World-Systems Research* 16, no. 2 (2010): 123–161.

12. Allen, "Poverty and the Labor Market."

13. FAO-UNICEF, *The State of Food Security and Nutrition in the World, 2021*; Our World in Data, "Number of People Who Cannot Afford a Healthy Diet, 2020," ourworldindata.org; Jarmo S. Kikstra et al., "Decent Living Gaps and Energy Needs around the World," *Environmental Research Letters* 16, no. 9 (2021); World Health Organization and World Bank, *Tracking Universal Health Coverage: 2017 Global Monitoring Report* (Geneva: World Health Organization, 2017).

14. For the Marxist tradition, see Robert Brenner, *Property and Progress: The Historical Origins and Social Foundations of Self-Sustaining Growth* (New York: Verso, 2009); Karl Marx and Frederick Engels, *The Communist Manifesto* (1848), www.marxists.org.

15. This figure is from Poland. See Jason W. Moore, "Amsterdam is Standing on Norway Part II: The Global North Atlantic in the Ecological Revolution of the Long Seventeenth Century," *Journal of Agrarian Change* 10, no. 2 (2010), 207. A similar decline of urban manufacturing occurred in East Elbe, Bohemia, Hungary, Livonia, and elsewhere. Immanuel Wallerstein, *The Modern World-System*, vol. 1.

16. Andre Gunder Frank, *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil* (New York: Monthly Review Press, 1967).

17. Immanuel Wallerstein, *The Modern World-System, Vol. III: The Second Era of Great Expansion of the Capitalist World-Economy, 1730s–1840s* (Academic Press: 1989), 146–49, 152, 156, 164–66. Wilma Dunaway notes that during the colonial period, Africa's integration into the capitalist world-system

did not witness any substantial proletarianization of the labor force, but instead saw the growth of informal sector activities, slavery, subsistence production, tenancy, and sharecropping in capitalist commodity chains. Wilma A. Dunaway, "Nonwaged Peasants in the Modern World-System: African Households as Dialectical Units of Capitalist Exploitation and Indigenous Resistance, 1890–1930," *The Journal of Philosophical Economics* IV, no. 1 (2010): 19–57.

18. Madhusree Mukerjee, *Churchill's Secret War* (New York: Basic Books, 2010), chapter 2.

19. George G. de H. Lampert, chairman of Britain's East India and China Association (1840), quoted in Wallerstein, *The Modern World-System*, vol. 3, 150.

20. Alvin Y. So and Stephen W. K. Chiu, *East Asia and the World Economy* (Thousand Oaks, California: SAGE, 1995), 44.

21. On the role of the state in Western European—and especially British—industrialization, see Wallerstein, *The Modern World-System*, vol. 3 and Ha-Joon Chang, *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism* (London: Bloomsbury Press, 2007). State planning and public investment also play a crucial role in technological innovation in the contemporary United States, despite that government's free-market rhetoric. See Noam Chomsky, *Turning the Tide: The U.S. and Latin America* (Montreal: Black Rose Books, 1987), 208–217; and Noam Chomsky, *Year 501: The Conquest Continues* (Boston: South End Press, 1993), chapter 4.

22. Chang, *Bad Samaritans*.

23. Allen convincingly argues that the first industrial revolution occurred in England rather than (say) France or India, because English workers had relatively high wages. Due to its privileged export position in the capitalist world-market, England's wages were among the highest in the world by the mid-eighteenth century (although they remained lower than prior to the rise of capitalism). This made it profitable for eighteenth-century capitalists to employ the spinning jenny in order to save on labor costs. By contrast, Allen's calculations show that using the spinning jenny would not have been profitable in India or France, because employing labor was so much cheaper than investing in capital goods. See Robert C. Allen, "The Industrial Revolution in Miniature: The Spinning Jenny in Britain, France, and India," *Journal of*

Economic History 69, no. 4 (2009). Allen argues that wage differentials also help to explain why labor-saving machinery was adopted in the United States but not in Latin America. Robert C. Allen, Tommy E. Murphy, and Eric B. Scheider, "The Colonial Origins of the Divergence in the Americas," *Journal of Economic History* 72, no. 4 (2012), 889.

24. Arghiri Emmanuel, *Unequal Exchange* (New York: Monthly Review Press, 1972), 123–133; Cope, *The Wealth of (Some) Nations*, 63–64.

25. The outsourcing of production to the periphery is a recurring pattern in the history of the capitalist world-system. New inventions are initially monopolized by one or two core powers, who can charge high prices for their products and reap windfall profits. Eventually, however, other core powers and even some semi-peripheral states are able to enter the market (usually through state-led industrial policies), thus eroding the monopoly power of the original firm. At the same time, wage costs in the industry tend to increase as rural surplus labor is depleted and trade unions push for better conditions. Faced with this profit squeeze, capitalists in the core begin to invest in newer lines of industry where they can exercise monopoly power. They also outsource the (increasingly outdated and unprofitable) production processes to the periphery in order to benefit from lower wages. This cyclical pattern ensures that the core states always specialize in high-priced monopolized production processes while the periphery produces for competitive markets with few barriers to entry and low rates of return. See Immanuel Wallerstein, *World-Systems Analysis: An Introduction* (Durham: Duke University Press, 2004), 26–32.

26. James H. Smith and Jeffrey W. Mantz, "Do Cellular Phones Dream of Civil War?: The Mystification of Production and the Consequences of Technology Fetishism in the Eastern Congo," in *Inclusion and Exclusion in the Global Arena*, ed. Max Kirsch (London: Routledge, 2006), 71–93; Stephen Jackson, "Making a Killing: Criminality and Coping in the Kivu War Economy," *Review of African Political Economy* 29, no. 93/94 (2002): 517–36; Justin Podur, *America's Wars on Democracy in Rwanda and the DR Congo* (London: Palgrave Macmillan, 2020).

27. For a discussion of labor control in West African cocoa farming, see Kate Manzo, "Modern Slavery, Global Capitalism and Deproletarianisation in West Af-

- rica," *Review of African Political Economy* 32, no. 106 (2005): 521–34. Genevieve Lebaron and Alison J. Ayers, "The Rise of a 'New Slavery': Understanding African Unfree Labour through Neoliberalism," *Third World Quarterly* 34, no. 5 (2012): 873–92. Compelling evidence on the scale of this problem is documented in *The Dark Side of Chocolate*, directed by Miki Mistari and U. Roberto Romano (Bastard TV and Video, 2010), www.slavefreechocolate.org. For an overview of the conditions faced by banana growers in Colombia, see Hough, "Global Commodity Chains," 148–54.
28. Vijay Prashad, *Red Star over the Third World* (London: Pluto, 2019).
29. Boris Kagarlitsky, *Empire of the Periphery: Russia and the World System* (London: Pluto, 2007); Wallerstein, *The Modern World-System*, vol. 3, chapter 3.
30. Reproduced in T. H. Von Laue, "A Secret Memorandum of Sergei Witte on the Industrialisation of Imperial Russia," *Journal of Modern History* 26, no. 1 (1954): 66.
31. This and the following sentences are based on Robert C. Allen, *Farm to Factory: A Reinterpretation of the Soviet Industrial Revolution* (Princeton: Princeton University Press, 2003).
32. Allen, *Farm to Factory*, 92.
33. Chang, *Bad Samaritans*, chapter 2; John Brewer, *The Sinews of Power: War, Money and the English State, 1688–1783* (London: Unwin Hyman, 1989).
34. Chang, *Bad Samaritans*.
35. Mariana Mazzucato, *Entrepreneurial State: Debunking Public vs. Private Myths in Risk and Innovation* (London: Anthem, 2013).
36. Shirley Cereseto and Howard Waitzkin, "Economic Development, Political-Economic System, and the Physical Quality of Life," *American Journal of Public Health* 76, no. 6 (1986): 661–66; H. F. Lena and B. London, "The Political and Economic Determinants of Health Outcomes," *International Journal of Health Services* 23, no. 3 (1993): 585–602; Vicente Navarro, "Has Socialism Failed?: An Analysis of Health Indicators Under Capitalism and Socialism," *Science & Society* 57, no. 1 (1993): 6–30; Dylan Sullivan and Jason Hickel, "16 Million and Counting: The Collateral Damage of Capital," *New Internationalist*, no. 541 (2022).
37. For Russia, see Moatsos, "Global Extreme Poverty." For China, see Dylan Sullivan, Michail Moatsos, and Jason Hickel, "Capitalist Reforms and Extreme Poverty in China: Unprecedented Progress or Income Deflation?," *New Political Economy* (forthcoming).
38. Amartya Sen, "Public Action and the Quality of Life in Developing Countries," *Oxford Bulletin of Economics and Statistics* 43, no. 4 (1981): 293.
39. Jean Drèze and Amartya Sen, *Hunger and Public Action* (Oxford: Clarendon, 1989), 214–15.
40. Utsa Patnaik and Prabhat Patnaik, *A Theory of Imperialism* (New York: Columbia University Press, 2016).
41. Moatsos, "Global Extreme Poverty"; Sullivan, Moatsos, and Hickel, "Capitalist Reforms and Extreme Poverty in China."
42. Isabella M. Weber, *How China Escaped Shock Therapy* (London: Routledge, 2021).
43. Don Fitz, *Cuban Health Care: The Ongoing Revolution* (New York: Monthly Review Press, 2020). Robert Allen's data indicate that, as of 2011, an unskilled laborer in Cuba has a welfare ratio of 6.6, higher than any other country in the periphery or semi-periphery. For perspective, the corresponding figure is 0.9 in Bolivia, 1.2 in Brazil, 1.3 in India, 3 in Russia, and 4 in China. Allen, "Poverty and the Labor Market," 121.
44. Hellen Yaffe, *We Are Cuba!: How a Revolutionary People Have Survived in a Post-Soviet World* (New Haven: Yale University Press, 2020), 120–46; "Despite U.S. Embargo, Cuba Aims to Share Homegrown Vaccine with Global South," *Democracy Now!*, January 27, 2022.
45. The primary cause of the famine was Joseph Stalin's decision to violently dispossess the peasantry of the land they had won during the revolution, forcing them to either relocate to the burgeoning industrial cities, or to produce cheap grain on state-controlled *latifundia* (misnamed "collective farms" for propaganda purposes). This policy was consciously designed to emulate the "primitive accumulation of capital" pursued by Western Europe during its industrial revolution. Allen, *Farm to Factory*, 57–61, 97–102, 106–10, 172–86. It is important to note, however, that Stalinist agrarian policy was not necessary for the USSR's dynamic socialist economy. Econometric modeling indicates that forced collectivization added only around 5 percent to Soviet GDP by 1939. As Allen puts it, "The human misery that accompanied collectivization was very large, while the economic gains were meagre." Mod-eling suggests that most of the USSR's industrial development can be accounted for by public investment in industrial capacity, the use of ambitious output targets rather than profits to guide firm behaviour, and subsidized full employment. "Adding collectivization to that recipe contributed little to growth and corrupted socialism." Allen, *Farm to Factory*, 166–71.
46. Noam Chomsky, "The Soviet Union Versus Socialism," *Our Generation* (Spring/Summer 1986).
47. Robin Hahnel, *Democratic Economic Planning* (London: Routledge, 2021).
48. Samir Amin, *Delinking: Towards a Polycentric World* (London: Zed Books, 1990); Fadhel Kaboub, "Elements of a Radical Counter-Movement to Neoliberalism," *Review of Radical Political Economics* 40, no. 3 (2008): 220–27; Max Ajl, *A People's Green New Deal* (London: Pluto, 2021); Ndongo Samba Sylla, "MMT as an Analytical Framework and a Policy Lens: An African Perspective," in *Modern Monetary Theory*, eds. L. R. Wray and Y. Nerisyian (Cheltenham: Edward Elgar Publishing, 2023); Jason Hickel, "How to Achieve Full Decolonization," *New Internationalist*, October 15, 2021.
49. Jason Hickel, "Quantifying National Responsibility for Climate Breakdown," *Lancet Planetary Health* 4, no. 9 (2020): e399–e404; Jason Hickel, Dan W. O'Neill, Andrew L. Fanning, and Huzaiifa Zoomkawala, "National Responsibility for Ecological Breakdown: A Fair-Shares Assessment of Resource Use, 1970–2017," *Lancet Planetary Health* 6, no. 4 (2022): e342–e349; Jason Hickel, Christian Dorninger, Hanspeter Wieland, and Intan Suwandi, "Imperialist Appropriation in the World Economy: Drain from the Global South through Unequal Exchange, 1990–2015," *Global Environmental Change* 73, no. 102467 (2022).
50. Lorenz T. KeyBer and Manfred Lenzen, "1.5°C Scenarios Suggest the Need for New Mitigation Pathways," *Nature Communications* 12 (May 2021); Jason Hickel et al., "Urgent Need for Post-Growth Climate Mitigation Scenarios," *Nature Energy* 6 (August 2021).
51. Joel Millward-Hopkins et al., "Providing Decent Living with Minimum Energy: A Global Scenario," *Global Environmental Change* 65 (2020).
52. Joel Millward-Hopkins and Yannick Oswald, "Reducing Global Inequality to Secure Human Wellbeing and Climate Safety: A Modelling Study," *Lancet Planetary Health* 7, no. 2 (2023).